Missouri Department of Natural Resources
Water Pollution Control Program

TMDL PAC Meeting
May 22, 2003

40 attendees present

Update on TMDL Issues
Sharon Clifford did a presentation. See attachment.

Questions and Comments:
Which Rocky Fork is having TMDL developed?
North of Columbia - old abandoned mine land. Turned into state park with ATV recreation area.

What issues were discussed at Jacks Fork meeting?
Participants talked about possibly addressing nutrients & sediments, not just bacteria. Because of anti-degradation issues in outstanding resource waters, the department would like for partnership to generate a total watershed management plan. According to local people, Jack's Fork is getting shallower and that is not good for canoes. Emphasized everybody is part of the problem and everybody needs to help. Finger pointing is not productive.

In reference to nutrients and livestock operations and the surrounding counties, how would you take care of that?
Any positive action is helpful, even when livestock is not the major problem. Department encourages all sources to be proactive. There are cattlemen who have signed up as participants in the watershed partnership.

Are we getting criteria based on anti-degradation in Standards?
Good question. Not sure where this will go, but we could have site-specific standards in the future.

Where is Town Branch?
It is a tributary to Little Sugar Creek in Arkansas. Town Branch receives the discharge from Bentonville's wastewater plant. Will be included in Elk River TMDL.

Comment: The Supreme Court has reached a decision regarding Missouri's TMDL state lawsuit. Lower court decisions were upheld.
Also, a petition was submitted to EPA last October based on the Missouri TMDL federal lawsuit. It is in regard to EPA designating assessment and monitoring reaches and applicable standards. EPA accepted the petition but nothing has been decided as to what they might do. Some of the problems involve issues such as Wisconsin having 20 assessment segments and Missouri having 2. A lot of discrepancies.

Presentation by Pat Costello, EPA Region VII, standards coordinator and approver of Missouri's 303 (d) list.

Review of the 2002 303(d) list was a team effort and involved many different people with in EPA. The review took as long as it did because it was more complicated than other state listings due to some consent decree aspects that needed to be dealt with in a special way. List is out for public comment on the proposed changes.

Missouri's 2002 Section 303(d) List
EPA's Proposed Action

Background:
Missouri Department of Natural Resources submitted the list on August 27, 2002. Mr. Costello reported the decision support document, along with the administrative record, are available in seven public libraries around the state. Public notice and fact sheet information is also available on the EPA Region VII web site.

Mr. Costello provided the following summary:

- Waterbodies and associated pollutants that were added back by EPA total 63 waterbody segments
- 46 of the waterbodies that EPA is adding back were delisted by the state without sufficient data or documentation
- Of those 46, there were 35 waterbodies that were formerly listed for sediment in 1998 but were converted to habitat loss by the state and subsequently delisted
- Based on EPA's review, the information from 1998 that was used for the sediment listing of these waters still supported sediment as a pollutant of concern. So EPA feels that the sediment impairment should be maintained for those 35 waterbodies.

<u>Questions related to the addition of the 46 Waterbodies</u>
(Questions answered primarily by Pat Costello, with additional comments from Sharon Clifford)

Does EPA's determination make any sort of a statement as to the adequacy of the data pertaining to sediment that was used to list those waterbodies?
The data used was the original basis for the 1998 listing. EPA has not seen any comments come in yet about this issue, so they have not specifically addressed that concern.

So the Pflieger data is sighted here as the basis for most of those listings?
Yes

Following DNR's listing methodology there are several different levels of data acceptability (1-4). What level of credibility was assigned to the Pflieger data?
Level 2 or 3, not sure which one. Pat will take question back to review team.

What kind of data would EPA like to see to delist these waterbodies? Was data provided to support the de-listings?

Don’t have an answer for the data needed at this point in time. No data or rationale was provided to support the delistings.

EPA accepted the listing in 1998, so you must have known what level of sediment data should have been acceptable in the first place.
John Ford can explain the listing and it may not be so much based on data, but best professional judgment or expert opinion about what was the cause of the impairment. If the state would provide actual data that would support the delisting or provide additional information showing that no sediment data was availble to support the original listing and these waters shouldn't have been listed in the first place, then EPA would have to a look at that issue. State's original basis was the Pflieger study and EPA accepted that back in 1998.

Why did you accept it in the first place?
That's a question for the person that was responsible for the list in 1998. Pat assumes it was based on information provided by state. The basis for a listing must be existing data and/or information from a study like the one done by Pflieger about the biological health of the waterbodies. That is a valid basis for listing.

Even if it doesn't have sediment data behind it?
Even if it doesn't have sediment data behind it. It is easier to list than delist. And everyone has learned a lot about this process since 1998.

I'm hearing more of a managerial administrative issue than a clear-cut technical issue.
At this point EPA feels that to be defensible, they have to have definitive data for them to delist a waterbody. What it comes down to is, if a waterbody is on the list, DNR has to deal with it. The sediment listings are waters where we need more data.

Is there any indication that the state has actual numeric data to support sediment listings?
DNR assessed all of the information. DNR gave EPA all the information they had in their databases. That doesn't mean other data doesn't exist.

Could the integrated listing methodology still be adopted before that rule goes into effect?
The 2002 Watershed Rule is on hold and may never be promulgated. DNR has been told to proceed with the 2004 303(d) list and if all possible to use the integrated methodology. The department is doing rulemaking on the listing methodology for 2004 and it is based on, and compatible with, the Integrated Listing Methodology guidance.

The waterbodies that EPA added don't have all the columns filled in (ie: length of impairment). Why didn't EPA fill in the columns?
EPA simply ran out of time. The information for waters retained or delisted is from the original 1998 list. Location, priority ranking, etc. was taken from when they were first listed and the information was rolled over into the 2002 list. EPA added some waters and they will work with the state to get clarification on location and length of these waterbody segments.

What is C under Column C?
C stands for Category (1, 2, 3 or 4). Category 2 & 4 are the waters the commission chose not to submit to EPA.

How can people comment if they don't know the length of the impaired section?

The length of the segments are available in Missouri's Water Quality Standards, Chapter 7, and those are available on the website.

Are sediment issues based on biological impact?
Protection of aquatic life is the standards issue behind sediment listings. They have been put on the list with a lower priority, because additional monitoring needs to be done to determine if there is a specific pollutant that is causing the stress to the biological community. The problem is identified on the basis of biological assemblage, such as a lack of diversity or numbers of organisms. This is a valid basis for listing and additional monitoring is needed in order to determine what are the pollutants of concern. All of the science is available for biocriteria and the department believes it is defensible to use that methodology to evaluate the health of waters whether or not biocriteria are currently part of the water quality standards.

Thought there would have been some kind of decision making – like don't list waters because we don't have the data needed to determine what the impairment should be.
The department is collecting more data all the time. We are trying to dig ourselves out of a hole on the data issue. Impairment to the biological community is a legitimate reason for listing, even when the exact impairment is unknown.

Is the 303d list a done deal and are people wasting their breath making comments?
EPA will take all comments into consideration.

(Continuation of EPA presentation)

- There were 10 waterbodies delisted with BOD, non-filterable residue, atrazine, and unknown impairments.
- EPA added chlordane and PCBs for the entire length of the Missouri River based on the state's own fish advisory. The state has a fish advisory on the entire length of Missouri & Mississippi Rivers for sturgeon. EPA chose to add chlordane and PCBs. So, the Big Rivers are still on list, but not for habitat loss. EPA mined information and/or data from Storet. The Region 7 office has been collecting fish tissue data for 30 years. The analyses are based on whole body samples, not fillets, and they were found to have high levels of PCB and chlordane throughout the year. There were two segments where EPA added mercury based on their retrieval of data from the STORET system.
- There was nothing in the reports and studies that the Department of Natural Resources had used as a basis for habitat loss that pointed to a specific pollutant as causing the problem. EPA concurs with the state's removal of habitat loss because there is not a specific pollutant and could be caused by instream modifications or structures that have caused an alteration of the River itself. That's not saying that habitat loss is not a problem, but rather that it is not appropriate in this context to be listed as a pollutant for TMDL development.
- Of the original 63 waterbodies, four waterbodies were added based on comments and information received from the state during their public comment period. EPA has reviewed the comments received during this comment period and made the determination that four waterbodies needed to be added to the list.
- There were 13 new waterbodies added based on EPA's review of the state's monitoring report on the 26 waterbodies which EPA reviewed under terms of the Consent Decree.

- For the 30 waterbodies that were retained by the state from the 1998 list, EPA is adding back pollutants that were removed by the state without sufficient data or information.
- 14 of these were waterbodies that were listed for sediment and then converted to Non-volatile Suspended Solids (NVSS) or Volatile Suspended Solids (VSS) by the state. Converting sediment to NVSS or VSS excludes the possible contribution of the fraction that is not listed. The arbitrary conversion from one to the other did not acknowledge that there may be a possible contribution from the impairment for which is was not listed.
- There were 13 waterbodies that were listed in 1998 for non-filterable residue and these were converted to volatile suspended solids by the state. Non-filterable residue is being added back because EPA felt the state excluded possible contribution of a non-volatile suspended solid fraction.
- Ammonia has been added back to two waterbodies because it was removed by the state without any documentation or data to support the removal.
- There was one other waterbody with low dissolved oxygen and was removed by the state without sufficient documentation or data that EPA is adding back.
- There were two retained waterbodies from the 1998 list where EPA is adding new pollutants: the Mississippi and Missouri Rivers where EPA has added chlordane and PCBs for the entire length based on the state fish advisory for Sturgeon and Sturgeon eggs.
- Benzopyrene was found in the Blue River so this will be added as a pollutant of concern.
- EPA has approved delisting of 17 waterbodies, added 40 waterbodies that were found to have mercury. 14 other waterbodies were added for other miscellaneous pollutants and data and documentation supporting this was provided.

Comments close on June 30. Any input from public to revise the list will be reviewed and a response summary will be prepared for each of the commenters. This process will not take 6-7 months.

Questions:
(Answers provided by Pat Costello with input by Randy Sarver, DNR, and Leanna Zweig (MDC)

Some of the streams have been added due to public comment, such as an unclassified section of River des Peres based on USGS data. Why would you list a stream that is unclassified?
Sierra Club had submitted data on River des Peres. It violated almost all of the "freedom from" narrative criteria. Narrative criteria apply to classified and non-classified waterbodies. Did find some DO data that also supported the listing.

You're applying specific criteria to an unclassified section. Do you apply all specific criteria to unclassified sections or just DO? Confusing, why do you even bother classifying certain reaches?
Acute levels are applied to unclassified sections rather than the chronic levels contained in standards. DO standard will likely stay at 5 mg/L for the foreseeable future. It is a controversial issue.

Streams added for Mercury, how did you assess the fish tissue, with an average or what?

State added those listings. EPA had recommended listings be based on fish tissue data and not fish advisories. John Ford can provide more exact information on tissue levels and how assessment was done. Missouri Department of Conservation (MDC) data was used, which is based on a single fillet rather than the whole body of the fish. MDC always sends their data to DNR along with the Department of Health's fish advisories. EPA added Missouri River for mercury, which was not on DNR's list. Based on Storet data. Received one sample in 1995 in Kansas City and one sample in St. Joseph that was over the 300 parts per billion. Data collected on big rivers is mostly from carp samples. Sometimes catfish are used, but it is always some type of bottom feeder. Fish advisory was for large bass. As top predators, they bioaccumulate mercury.

Additional monitoring is being done on Roark Cr., Bull Cr., Beaver Cr. Who is doing this monitoring?
MDC is doing this monitoring. Reports of progress on data collection for Bull Cr. & Beaver Cr. should be available soon, but no promises. Roark Cr. is on the schedule for next year. Swan Cr. is OK. A major concern for Taney County streams is game fishing, specifically the size & growth of game fish over time.

Going back to streams listed for sediment, what happens if we find information to indicate a habitat loss issue rather than a sediment issue?
You couldn't exclude the fact that sediment played some roll.

We don't know how you allocate that.
You deal with it the best way you can. Impairments due to hydrological changes caused by structures, dams and locks, etc. do not make it on the list.

Looking at the data on atrazine, it is primarily a seasonal contaminant. There is usually a spike in May or June. Is the acute or chronic standard for Atrazine utilized in listing process?
Acute. But chronic problems can arise from atrazine exposure, particularly for pregnant woman, young children and older adults. The department is beginning a process with EPA to evaluate DNR's monitoring program and see what we need to have a comprehensive monitoring program in Missouri. The monitoring needs are enormous for point source issues, TMDLs, assessment process, State Revolving Fund expenditures, BMP reductions, etc. We are trying to determine what all the needs are and prioritize them. The Water Quality Monitoring Section within DNR has tripled within last 5 years and we still can't come close to meeting the monitoring needs.

In 1998, best professional judgement carried more weight than now. What are the assets of using best professional judgement if it has an acceptable methodology? This issue is part of what we're up against on monitoring for biocriteria, sediment and other issues. Department biologists could make best professional judgements in some instances that we can stand behind.
We have a higher weight of evidence standard now than what we used to have in 1998. In some cases, use of best professional judgement is warranted.

Is the state looking at a monitoring approach that includes a rotational basin type of sampling program?

This is not easy to do it in Missouri. It makes more sense to focus on a smaller area in a state that is rich in water resources.

When will the state put out 2004 methodology?
The information on the listing methodology was presented at the last Clean Water Commission meeting. They decided the department should do rule making on the 303d listing methodology. This will probably result in the 2004 303d list being submitted a year late.